Public Health Directory (PHINDIR)
and
Role-Based Authorization

PUBLIC HEALTH INFORMATION NETWORK

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and
Role-Based Authorization

♫ To dream...the impossible dream... ♫

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Terminology

PHIN

Authorization

Jurisdiction

Organization

Partner Organization

Vocabulary

Terminology

PHIN — a set of public health functional and technical specifications

Authorization

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PHIN — a set of public health functional and technical specifications

Authorization — permission to access or use a resource

Jurisdiction — a domain subject to authority

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Partner Organization Vocabulary — a public health Organization bound to meet PHIN specs

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Terminology

PHIN — a set of public health functional and technical specifications

Authorization — permission to access or use a resource

Jurisdiction — a domain subject to authority

Organization — a government or business entity

Partner Organization — a public health Organization bound to meet PHIN specs

Vocabulary — standardized terminology and/or encoding of information

What is PHINDIR?

Public Health Directory:

- **Distributed repository of public health…**
  - people
  - jurisdictions
  - organizations
  - roles

- **Supports inter-organizational…**
  - communication
  - data exchange
  - emergency preparedness and response

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Public Health Directory

There cannot only be one

Public Health Directory
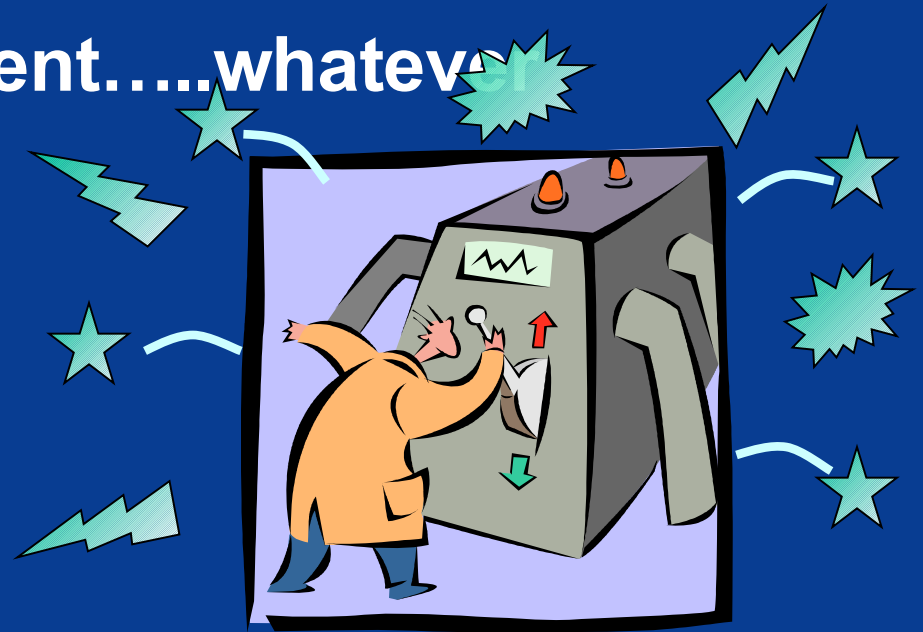
- Is *not* "public"

- Controlled access

Public Health Directory

- **Originally:** a specific LDAP schema
- **Now:** a directory data *exchange* protocol

Public Health Directory

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  - Partners implement…..whatever

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Public Health Directory

- **Originally: a specific LDAP schema**

- **Now: a directory data *exchange* protocol**

  - **Partners implement…..whatever**

    - Partners must be able to exchange directory data with each other

    - Data must be transformable into the ~~~~ange protocol

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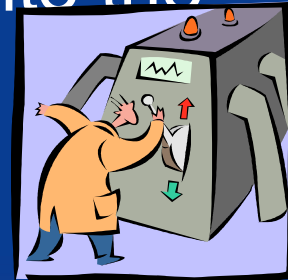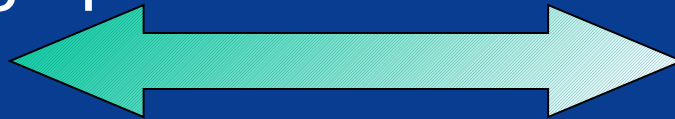
Public Health Directory

- **Specifies scope of people, roles and organizations that each Partner Organization must maintain:**

    - Certain officials in each Partner Organization

    - Organizations and people involved in emergency response plan

    - Organizations and people that play a role in PHIN system

What is Role-Based Authorization?

Another Security Model:

- Set of defined "roles"
- Roles get access to resources

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What is Role-Based Authorization?

Another Security Model:

- **Set of defined "roles"**
- **Roles get access to resources**
- **People are assigned to roles**
  - Role gives person access to resources

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What are "roles"?

Job Titles:

District Health Director, District 7

Chief, Information Systems Branch

Communications Officer, Division of Environmental Health

Job Classifications:

Nurse

Medical Technologist

Pathology Technician

Statistician

Licenses, Degrees, Certifications:

Doctor of Medicine

Master's Degree in Epidemiology

EMTP Paramedic Certification

American Heart Association, Provider CPR

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What are "roles"?

Job Titles:

District Hea...
District 7...

Chief, Infor...
Branch

Communic...
Division ...
Health

Job Classifications:

...iologist

...hnician

Roles:

Health Officer

Emergency Management Coordinator

Chief Epidemiologist

Communicable/ Infectious Disease Coordinator

Environmental Health Director

...iology
...on

American Heart Association, Provider CPR

Role-Based Authorization

Advantages over person-based authorization

- Forces definition of common business functions and their information/system/resource requirements

- Forces use of common terminology

- Better security model: Justification for giving someone an authorization is pre-defined and based on their business function

- Different, autonomous authorities can own and manage different roles
  - They know best, they know first

- As people change jobs, it is more obvious that corresponding role assignments need to change also
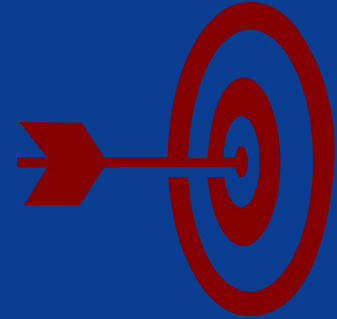
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Role-Based Authorization

Challenges:

- Must establish common role vocabulary and definitions
- Must define & control who can assign roles
  - Consequences of error or misuse
- Partners must be able to trust each other's controls
- These controls limit open maintainability of directory
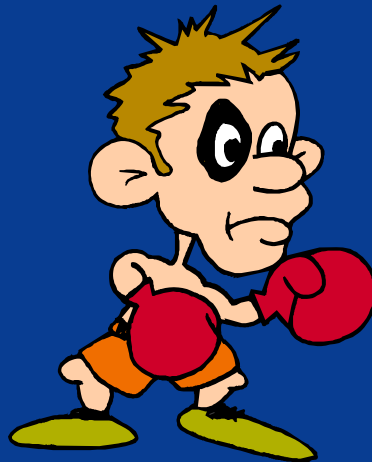
PHINDIR and Role-Based Authorization

OUR TARGET:

- Partners agree on role definitions
- Partners agree on role authorizations
- Partners each implement a PHINDIR
  - That support roles and assignment of people to roles
- Designated authorities in each Partner manage role assignments
- Partners each implement good controls over PHINDIR management, including role assignment
  - Technical controls
  - Business process controls

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PHINDIR and Role-Based Authorization
OUR TARGET, cont'd:
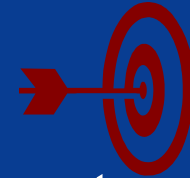
- Partners exchange PHINDIR data using the protocol
  - Using common data elements and data vocabularies
  - Partners know nothing about each others' implementations but understand each others data

- Partners trust each others' PHINDIR management controls
  - Including role assignments

- Partners trust each others' role-based authorizations

- Therefore partners feel confident…
  - Sharing sensitive information with partners
  - Letting role players from partner organizations access their information

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PHINDIR and Role-Based Authorization

More Challenges:

- Defining and codifying all of this
- Obtaining partner BUY-IN
  - At executive level, program level, technical level
  - Understanding importance
- Executing formal agreements

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